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(54) Title: WOVEN WIRE CLOTH SCREEN

(57) **Abstract:** A woven wire cloth screen is described in which at least one fine mesh cloth overlies a coarser mesh backing cloth and an additional coarser mesh cloth is secured over the fine mesh cloth, whose mesh and wire size at least are selected so as in general to prevent relatively large abrasive particles from making contact with the fine mesh cloth. Two fine mesh cloths may be sandwiched between the coarser cloths. In one screen the backing cloth is 30# x 0.1280mm diameter S/S wire, the upper fine mesh is 180# x 0.030mm diameter S/S wire, the lower fine mesh is 160# x 0.036mm diameter S/S wire, and the additional top cloth is 30# x 60# x 0.160mm diameter S/S wire. A method of making such a screen is described in which the cloths are in turn laid over a rigid frame to which they are to be bonded and the tension in the wire mesh cloths is achieved using pneumatically powered rams acting on clamps which grip the edges of the cloths. All the rams are of the same size and different tensions are imparted to the cloths by supplying air at differing pressures to the rams acting on the different cloths. In particular a method is described for making a woven wire cloth screen which will withstand highly abrasive large particles such as obtained when drilling through Utsira sand, in which a support frame is located in a jig, a coarse backing cloth is stretched over the frame and secured between clamping jaws along all four edges and then tensioned by moving all the clamps relatively outwardly by pneumatic rams. A fine mesh wirecloth is then stretched over the first cloth and similarly tensioned by means of a second set of clamps and rams. An additional coarse mesh cloth is then similarly stretched over the fine mesh cloth and tensioned by means of a third set of clamps and rams. Thereafter the cloths are secured to the support frame under pressure. After releasing the pressure, opening the clamping jaws, and trimming surplus wirecloth back to the frame, the finished screen can be removed from the jig. A second fine mesh cloth can be laid over the first fine mesh cloth before the top coarse cloth is applied, and the two fine mesh cloths can be clamped using the same set of jaws and rams.

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